REMARKS

Claims 1-5 are all the claims pending in the application.

The Examiner objects to the drawings as failing to comply with 37 C.F.R. 1.84(p)(5) because Figures 1 and 4 include reference signs 10 and 205 not mentioned in the description. Applicant amends the specification to includes these reference signs as shown in the Appendix to overcome this objection.

The Examiner rejects claim 3 under 35 U.S.C. § 112, second paragraph, as lacking sufficient antecedent basis for limitations in the claim. The Examiner also objects to claims 2-4 for various grammatical and syntactical informalities. Applicant amends claims 1-4 to correct typographical and grammatical errors and to overcome the §112 rejection of claim 3. Applicant notes that these amendments are for precision of language only and do not narrow the scope of the claims beyond the scope of the original claims.

The Examiner rejects claims 1-3 under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent 5,828,844 to Civanlar in view of U.S. Patent 6,189,041B1 to Cox et al. The Examiner also rejects claims 4 and 5 under §103(a) as being unpatentable over Civanlar and Cox further in view of U.S. Patent 5,809,233 to Shur. Applicant respectfully traverses these rejections. Neither Civanlar nor Cox, considered separately or in combination, teach or suggest the features of Applicant's invention as claimed in independent claim 1.

The Examiner alleges that Civanlar teaches all of the features of the invention as claimed in claim 1. Applicant respectfully disagrees. Civanlar does not teach or suggest the feature of

"determining by an MPOA server...about whether or not said address resolution request packet is to be forwarded to the other MPOA server or the other MPOA client based on layer 3 packet filter information". Civanlar discloses that a source host sends an address resolution request to ARP server to obtain the ATM address of a router. The source hosts uses this address to assemble the path to the router (Civanlar, column 3, lines 25-32). Even if, assuming *arguendo*, that the source host of Civanlar corresponds to the MPOA server as alleged by the Examiner, Civanlar does not disclose that this source host determines "whether or not said address resolution request packet is to be forwarded to the other MPOA server or the other MPOA client". Instead, Civanlar discloses that the source host builds a path to the router, in all situations. Civanlar does not disclose that the address resolution request is sent to a client. Cox does not supply this deficiency in Civanlar with respect to claim 1, nor does the Examiner allege that it does.

Among the other features of Applicant's invention as claimed in claim 1 are MPOA servers, MPOA clients, and MPOA packets, none of which are disclosed by either Civanlar or Cox. The Examiner acknowledges that Civanlar does not teach these features, but alleges that these are "merely labels or terms imposed by Applicant and are not used standard in the art". Applicant respectfully disagrees. MPOA is a standard abbreviation in the art for Multiprotocol Over ATM, which is an industry standard communication protocol (Cox, column 3, lines 64-67). MPOA is a unique and distinct protocol, different from the NHRP protocols supported by the devices in Civanlar and Cox (Civanlar, column 3, line 65 through column 4, line 18; and Cox, column 3, lines 52-67). Therefore, the recitation of MPOA servers, clients and packets in claim 1

are more than mere descriptive labels as the Examiner alleges, they are substantive limitations not disclosed or suggested by either Civanlar or Cox.

Because Civanlar and Cox, considered separately or in combination, do not disclose or suggest at least these features of Applicant's invention as claimed in claim 1, claim 1 is patentable over the references. However, even if, assuming *arguendo*, Civanlar and Cox did recite these features, it would not have been obvious to one of ordinary skill in the art to combine these references to achieve Applicant's invention. Nothing in the disclosure of either Civanlar or Cox suggests such a combination. In fact, Civanlar and Cox disclose alternative and incompatible methods for performing packet routing in an ATM network, such that it would not be possible to combine the systems of the references without rendering one reference's system inoperable.

For example, Cox discloses that it eliminates the need for layer-3 routing in an ATM network that uses a Next-Hop Resolution Protocol (NHRP) by using a vendor private extension to establish a virtual client connection (Cox, column 5, lines 25-27; and column 5, lines 63-65). In particular, Cox eliminates the step of determining whether the destination is in a layer 3 sub-network (column 8, lines 17-21).

By contrast, Civanlar discloses that it is advantageous to avoid the use of the NHRP protocol altogether by employing IP switches instead. Civanlar discloses that one of the advantages of IP switches over NHRP is that each host connected to one of the switches is only two hops away from any other host, in which case NHRP is unnecessary because there is no

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extended series of hops that must be navigated (Civanlar, column 5, lines 11-14; column 4, lines 44-48). It would not have been obvious to combine Civanlar and Cox because Civanlar teaches away from the use of the NHRP protocol that forms the basis of the invention of Cox. The disclosure of Civanlar explicitly discloses that the use of IP switches is superior to NHRP because there are only at most two hops between any two hosts, eliminating the need to restore the address of the next hop, which is the case in Cox. It would not have been obvious to combine Civanlar with a reference whose underlying technology Civanlar explicitly discloses is inferior. Therefore, because Civanlar teaches away from Cox, there is no suggestion in Civanlar that would render the combination obvious.

Because Civanlar and Cox, considered separately or in combination, do not disclose all of the features of Applicant's invention as claimed in claim 1, and because it would not have been obvious to one of ordinary skill in the art at the time of the invention to combine the references as the Examiner suggests, Claim 1 is patentable over the cited references at least for these reasons. Claims 2-4 are allowable at least by virtue of their dependency on claim 1.

With respect to the rejection of claims 4 and 5, the Examiner acknowledges that Civanlar and Cox do not teach the execution of error processing when the passage of the filter information is not permitted. The Examiner alleges that Shur supplies this deficiency. Applicant respectfully disagrees.

Shur discloses that in the event of the failure of a call to a destination due to stale address information in a query, a new query will be created with updated address information (Shur,

column 7, lines 46-56). However, claim 4 requires that "wherein when passage of said filter is not permitted, directing the execution of processing for forwarding the received MPOA address resolution packet to the other MPOA server or the other MPOA client." In other words, if passage of the information is not permitted, the existing MPOA address resolution request packet is forwarded on to another MPOA server or client. But this is not the case in Shur. Shur explicitly discloses that the query containing the stale information is removed, and a new one created in its place that has different information (Shur, column 7, lines 48-54). Therefore, Shur does not disclose or suggest "forwarding the received MPOA address resolution packet" as required by claim 4.

Furthermore, assuming *arguendo*, that Shur did supply this acknowledged deficiency of Cox and Civanlar, there would have been no motivation to combine it with Civanlar or Cox. Shur discloses the use of the NHRP packets and addressing that Civanlar suggests is inferior to its IP switches. It would not have been obvious to combine Civanlar with a reference whose underlying addressing protocol it considers inferior.

Because Shur does not supply the deficiencies in Civanlar and Cox with respect to claim 4, claim 4 is patentable at least for these reasons. Claim 5 is allowable at least by virtue of its dependence on claims 4 and base claim 1.

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the

Examiner feels may be best resolved through a personal or telephone interview, the Examiner is

kindly requested to contact the undersigned attorney at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue

Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any

overpayments to said Deposit Account.

Respectfully submitted,

SUGHRUE MION, PLLC
2100 Pennsylvania Avenue, N.W.
Washington, D.C. 20037-3213
Telephone: (202) 293-7060
Facsimile: (202) 293-7860

George G. Ballas
Registration No. P-52,587

Date: January 17, 2003

APPENDIX

VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE SPECIFICATION:

The specification is changed as follows:

The paragraph beginning at page 7, line 12 is changed as follows:

"Fig. 1 is a diagram showing a structure of an MPOA client 10 for carrying out a method

of the present invention for transferring an MPOA packet. The MPOA client 10 comprises a

client MPOA packet processor 11, a source layer 3 address extension processor 12, and a client

MPOA packet transmitting portion 13, which are connected as shown in the Fig. 1. The client

MPOA packet processor 11 functions so as to receive from the outside an instruction to start

MPOA address resolution processing. The source layer 3 address extension 12 functions so as to

be able to receive from the outside an instruction indicating whether or not the source layer 3

address is included in the extension of the MPOA packet."

The paragraph beginning at page 10, line 7 is changed as follows:

"The layer 3 filter retrieving portion 23 retrieves the layer 3 filter information using those

two received layer 3 addresses, determines whether or not passage through the filter is

permissible (step 203), and the server MPOA packet processor 22 is informed of the result. The

server MPOA packet processor 22 judges whether the information from the layer 3 filter

retrieving portion 23 is "permissible" or "not permissible" (step 204). If "not permissible", error

processing (step 205) is executed and the routine ends (step 206). If the result is "permissible",

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processing is executed for forwarding the received MPOA address resolution request packet to

the other MPOA server or the other MPOA client for delivery to the server MPOA packet

transmitting portion.

IN THE CLAIMS:

      The claims are amended as follows:

1.   A method for transferring MPOA packets in an ATM network, comprising ~~the~~

~~step for~~ determining by an MPOA server which has received an address resolution request packet

from an MPOA client ~~about~~ whether or not said address resolution request packet is to be

forwarded to ~~the~~ another MPOA server or ~~the~~ another MPOA client based on layer 3 packet filter

information.

2.   A method for transferring MPOA packets according to claim 1, ~~wherein~~ the

method comprising ~~the step of~~:

    transmitting by said MPOA client a source layer 3 address of the data packet that is to be

a short cut, said source layer 3 address being added ~~by adding~~ as an extension ~~of~~ to the MPOA

address resolution request packet~~,~~;~~while the~~ and

    determining by said MPOA server ~~determines~~ whether or not said MPOA address

resolution request packet is to be forwarded to the other MPOA server or the other MPOA client

based on said source layer 3 address placed in the extension and ~~the~~ a destination layer 3 address

in the MPOA address resolution request packet received from said MPOA client, after ~~being~~

~~verification~~verifying ~~of~~the layer 3 packet filter information.

3.   A method for transferring MPOA packets according to claim 1, ~~wherein~~the

method comprising ~~the step for said MPOA client of~~:

said MPOA client ~~notification~~notifying a source layer 3 address processor by ~~the~~a client

MPOA packet processor in said MPOA client of ~~the~~a MPOA address resolution request

operation and a source layer 3 address information~~to the source slayer 3 address processor~~;

said MPOA client judging by the source layer 3 address ~~extension~~processor ~~which has~~

~~received the notification~~about whether or not ~~the~~an outer instruction of said MPOA address

resolution request operation directs ~~to include~~including ~~sion of~~the source layer 3 address in the

MPOA packet extension~~, and when the answer is yes, to make the MPOA packet extension~~

~~include the source layer 3 address~~; and

said MPOA client transmitting to an MPOA server by ~~the~~a client MPOA packet

transmitting portion the MPOA address resolution request packet with the MPOA packet

extension added at said client MPOA packet processor~~to an MPOA server~~.

4.   A method for transferring MPOA packets according to claim 1, ~~wherein~~the

method comprising ~~the step for said MPOA server~~of:

a MPOA packet receiving portion of said MPOA server receiving ~~by the MPOA packet~~

~~receiving portion~~the MPOA address resolution request packet from said MPOA client;

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a MPOA packet processor of said MPOA server checking by the server MPOA packet processor about whether or not the source layer 3 address is included in the received MPOA address resolution request packet, and

when said source layer 3 address is included, said server MPOA packet processor obtaining by the server MPOA packet processor of the source layer 3 address and the a destination layer 3 address;

a layer 3 filter retrieving portion retrieving by the layer 3 filter retrieving portion of the a layer 3 filter information using said source layer 3 address and the said destination layer 3 address as the key, and

said server MPOA packet processor judging by said server MPOA packet processor about whether or not to permit passage of the filter; and

directing the execution of error processing;

wherein when not passage of said filter is not permitted or directing the execution of processing for forwarding the received MPOA address resolution packet to the other MPOA server or the other MPOA client.